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MYOCRISIN THERAPY IN ARTHRITIC DISEASE OF THE DOG

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INTRODUCTION

Before describing the results of treatment with gold salt injections, it appears advisable to preface this with a few remarks regarding arthritis in general. Failure to do so can only result in confusion regarding the claims made for the treatment. This is largely due to the fact that the subject under discussion is one in which the terminology is apt to be misleading. Thus the rather obvious point that what holds for the treatment of one type of arthritis most certainly does not hold automatically for all others loses a large part of its value if the various types of lesion are not sufficiently well defined. With the increasing use of radiography in veterinary small-animal practice there is now little excuse for cursory clinical examination and an all-embracing diagnosis of rheumatism or lumbago being made. Our results would suggest, further, that to embark upon a series of gold injections on such a basis discredits both the drug and the clinician employing it.

At the outset, therefore, we make the following divisions on a clinical basis and as far as possible avoid using terms such as osteoarthritis, hypertrophic and rheumatoid arthritis, etc. The word arthritis itself is taken to mean simply inflammation of a joint. This we qualify by stating whether it is of (1) traumatic, (2) post-traumatic, or (3) non-traumatic origin, meaning respectively (1) following rapidly and obviously from a known injury, (2) subsequent to a previous injury either known or unknown and generally after a considerable interval of time, and (3) of origin other than injury.

1. TRAUMATIC

A. Infected. Penetrating wounds of joint resulting generally in acute to subacute arthritis.

B. Non-infected. Severe damage to joint often with fractures present, frequently resulting in semi-anchylosis.

2. POST-TRAUMATIC

A. Result of trauma plus hereditary factor, *e.g.*, Perthe hip, patellar lesions. Degree of trauma very slight.

B. Long-term result of 1B above but only in cases where the former is of very slight degree, *e.g.*, slipped upper epiphysis (Formston & Knight, 1942).

3. NON-TRAUMATIC

A. Infective. Arising during course of various diseased conditions, *e.g.*, navel ill, septic polyarthritis.

B. Non-specific, *i.e.*, cause unknown.

The only division requiring further explanation is 3B. This is not meant to include so-called rheumatism or rheumatoid arthritis for we do not recognise any syndrome in the dog which resembles this disease in man, namely, a progressive condition eventually involving many joints and notorious for the crippling and deforming effects it produces. It is essential to make this clear since it is proposed to describe shortly the results obtained with gold therapy and in the human this drug is employed largely in rheumatoid arthritis. It is perhaps not inopportune at this point to say that in our opinion progress in respect of arthritic lesions in the dog is hindered rather than helped by continuing to use terms such as rheumatism and rheumatoid arthritis. The word rheumatism might be better confined to muscular rheumatism only, which is a distinct and generally accepted entity. Rheumatoid arthritis is best dispensed with altogether unless convincing proof can be produced of a condition in dogs resembling closely the human disease. Alternatively, confusion would be prevented by stating that a lesion was rheumatic-like or of the rheumatoid type. Thus when a canine case is described as suffering from rheumatism or rheumatoid arthritis of, *e.g.*, the stifle joint, then quite frankly we do not understand what is meant, neither as to the radiographic picture that such a lesion will present nor what its aetiology is supposed to be. It must be assumed that the clinician in such a case has eliminated all the possible causes of inflammation in this joint, at least those generally accepted. An excellent representative sample of these is included in G. Schnelle's "Textbook of Radiology," ranging from traumatic lesions to bone tumours. We do not intend it to be understood by this that occasionally cases are not encountered, especially in older animals, where the exact aetiology is doubtful. We should imagine that there probably exist several syndromes having much in common with certain rheumatic-like complaints in the human, *e.g.*, climacteric or chronic villous arthritis, osteo- or hypertrophic arthritis. We stress, however, that such cases are uncommon. During the last two years over 100 cases of post-traumatic arthritis alone have been treated with gold therapy, yet it is doubtful whether we have encountered in the same period half a dozen cases where no opinion at all could be formed as to possible cause. The division 3B, therefore, is made for these very few exceptional cases. It is evidently a matter of opinion at present whether two spinal conditions (calcified disc and spondylitis deformans) are best classed as arthritis or not, but since we wish to refer to them in this article they may, for this purpose, very well be so classed.

GOLD THERAPY

The only veterinary references found in respect of this are the original article by McCarmick (1943) and a recent one by Wilkinson (1951). Rather than publish the findings in individual cases we prefer to state the general impressions which have been formed and then proceed to an evaluation in individual joints. The gold salt used in all cases was Myocrisin (May & Baker). Over 100 cases have been treated so far. The majority of these had a course of injections extending over 10 weeks. In perhaps half a dozen cases the treatment was stopped after about a month since no observable improvement was taking place. These were amongst the earlier cases and were probably ill chosen as subjects for treatment. Thus it became apparent after very short trial that in certain types of arthritis the results were so poor

that the use of the drug in such cases must be abandoned. These comprise all arthritic lesions obviously arising from bacterial infection independent of whether this is of internal origin (septic polyarthritis) or of external origin (penetrating wounds). This does not refer to acute lesions which would be treated by other methods but to cases of subacute and chronic disease. Another large group in which no benefit has been apparent are those cases in which a degree of hereditary abnormality is present independent of the exciting cause, the best example being arthritis affecting the stifle in breeds such as the Chow and the Bulldog. Although the initial cause of the lesion in the above group is practically always traumatic, it is, with their sole exception, in the field of post-traumatic disease that most benefit has been seen from treatment. Perthe hip in the terrier breeds is excluded from the above generalisation. The degree and type of trauma will be made clear in the discussion of the individual joints, which follows. Before treatment was commenced all cases were subjected to radiographic examination. This is more or less an absolute necessity if any idea is to be obtained regarding the likelihood of response to treatment. According to our clinical classification, therefore, response may reasonably be expected in a large proportion of cases of the class 2B. In class 2A response is obtained practically only in Perthe hip. Several of the cases reported by Wilkinson would come into class 3B, therefore in this group also response may be seen. No success has been obtained in cases coming within groups 1A, 1B and 3A, or in the majority of those in 2A.

Hip Joint

Arthritis of this joint is extremely common and the majority of the dogs treated with Myocrisin were affected with this condition. On radiographic examination, the main lesion is seen to be confined to the femoral head. All such cases are apparently of traumatic origin and any exceptions to this must be very rare. The trauma, however, may be of very slight degree. The arthritic symptoms are not as a rule apparent until some considerable time after the original injury. When this lesion is seen in young dogs it falls into the class of Formston and Knight's epiphyseal fracture or Perthe type hip. Our own view in respect of these two conditions is identical with that of Shuttleworth (1950). This view might be summarised as follows. Firstly, the distinction between the two complaints is upheld inasmuch as there is strong evidence to suggest that a hereditary factor is present in so-called Perthe hip. The majority of our own cases were seen in Cairn and Lakeland terriers. We have also seen bilateral cases. Shuttleworth defines the lesion as being "an avascular necrosis of the femoral head due to interference with the blood supply to the extremity following slipping of the epiphyseal cartilage." K. H. Pridie, at this year's annual meeting of the British Orthopaedic Association, said that the primary factor in cases of osteoarthritis of the hip was always a vascular catastrophe in the head of the femur or acetabulum. The type of case which simulates the Perthe variety, says Shuttleworth, is produced by trauma of a degree which stops short of producing dislocation or complete separation of the femoral head, but which "damages the soft structures to such an extent as to leave a traumatic arthritis or injure the epiphyseal cartilage so that development of the young femoral head is arrested." Further, the act of trauma in this latter condition is generally known to the owner and the lameness which follows is of immediate onset. In the Perthe type, on the other hand, the trauma which initiates the lesion generally goes unnoticed and is of very slight degree. We will not enter here into any greater detail regarding these conditions, *e.g.*, Schnelle's differentiation of the Perthe type into coxa plana and coxa vara, for we are concerned mainly with the treatment of the resulting arthritis. These lesions, of course, are seen in young dogs. In older animals the arthritis is a sequel to a previous injury. In the odd case where there is no known history of previous accident, such an assumption can be made fairly safely. Although radiography is essential for deciding whether the case is suitable for treatment it is of little value in forecasting the degree of response. Often cases with gross deformity (femoral head and neck) have done as well as those where very little change from normal was discernible. A few cases have been X-rayed after treatment and the plates compared. Although some change has been apparent in the appearance of the head, it has not been as marked as one might have expected from the improvement observed in function. Other lesions noted on radiography, apart from deformity of the head, enter into the prognosis. In young dogs it is not uncommon to observe a coincident shortening of the femur. This appears to arise mainly from contraction in the region of the femoral neck and naturally a full return of normal function cannot be expected in such cases. Shortening of the leg is seen in cases following either fractured neck, slipped epiphysis, or Perthe hip. In all types this shortening derives from the region of the femoral neck. This point is noted and commented on by Shuttleworth (1950). It is also described by Schnelle, more particularly under coxa vara. To display shortening radiographically, positioning must be made with care in order that complete symmetry between the two femurs is obtained. This is especially important in Perthe type cases, for when shortening is present it can hardly be missed if the radiography is perfect (*i.e.*, for position), yet it is perfectly easy to miss slight lesions on the articular surface of the head. Gross acetabular deformity and minor degrees of dislocation (inability to obtain full reduction after complete dislocation) render the prognosis doubtful but are not absolute contra-indications to treatment. In general, the results with Myocrisin in arthritis of the hip have been very good indeed and superior to those obtained in other joints, excepting, naturally, those in which full recovery takes place. Whilst this latter result is not uncommon it occurs most frequently with the hip. Most Perthe cases make a complete recovery unless there is marked shortening of the femur. Other hip cases approach this, depending on the seriousness of any complicating factors which may be present. It has been said that Perthe cases will recover of their own accord in time. The direct opposite has also been stated. Formston and Knight (1942) gave a highly unfavourable prognosis in cases of slipped upper epiphysis and Perthe hip. Prior to gold therapy our results in the latter condition were fairly good, whereas those in cases other than the Perthe type commonly were only fair and on occasion very poor. With Myocrisin treatment of Perthe cases cure can be obtained inside 10 weeks. Other hip cases approach this in time of response. Further, since Perthe cases are generally presented whilst the condition is still building up towards its worst period, it is an achievement to be able to check the lesion and hurry forward its resolution. Previous to gold therapy these cases took anything up to six months to recover. The other essential requirement with gold treatment is complete rest or close confinement. Indeed, the importance of rest in the treatment of arthritis in general can hardly be over-stressed.

Stifle Joint

Results here have been disappointing. This is perhaps only to be expected when one considers the multiplicity of conditions which affect this joint. The fact must also be noted that in certain breeds the joint is normally unstable. It is also probably the commonest joint in which one

encounters an infective arthritis. It is not our intention in this article to describe further the various types of lesion encountered in this joint, for to do so would require an article in itself. Suffice it to say that in many instances there are clear indications for treatment of a type other than gold therapy. In some cases, for example, complete immobilisation of the joint probably still remains one of the commonest requirements ; in others, nothing other than surgical intervention can hope to produce anything approaching cure. This is especially true when the patella is at fault. Therefore to use a drug such as Myocrisin in arthritis of this joint without prior elimination of the many conditions which are unlikely in the extreme to respond to its use is to court almost certain failure. The position may be summarised by saying that it is highly unlikely that one will normally encounter many cases of stifle arthritis which will show sufficient response to gold therapy to effect complete and permanent cure by its use alone.

Hock and Carpal Joints

Quite a number of cases having arthritis of these joints have been treated. Most have occurred in racing greyhounds and to a lesser extent in Alsatians. The results have been most promising and form an excellent test of the complete resolution of the lesion. We mean by this that greyhounds are naturally subjected as soon as possible to a test which imposes severe strain on the affected part and provides as critical a test of the cure as one could require. Since these cases are generally presented at a very early stage, quite often radiography is negative or at the most suspicious, but several dogs have been treated with well-marked radiographic evidence of arthritis and the results have been good. They have certainly been superior to anything previously achieved with long spells under plaster, etc. Carpal arthritis is commoner than might be supposed and generally follows an apparently trivial injury. Previously, it had been regarded as being an extremely difficult condition to deal with effectively, once established.

Elbow and Shoulder Joints

Arthritis of these joints is perhaps less common, but we have treated two cases with arthritis of the elbow. Both did well—one particularly so, if the radiographic picture alone should be taken as the guide to its seriousness on first examination. So far, no opportunity has arisen of treating the shoulder, but judging from what has been achieved with the other joints, we would expect reasonably good results.

Dosage

Until recently the original dosage scheme as described by McCarmick has been adhered to. Injections are given weekly after a primary testing dose. It has never been necessary to exceed 10 injections and in many cases six or eight have been sufficient. Subjective improvement is often seen after the second dose. This appears to be due to a disappearance or alleviation of pain but generally four injections are required before marked improvement in walking is apparent. Each case must be judged on its merits, however, as to the length of time the therapy is continued. Experience so far suggests that if no improvement at all is apparent after five or six doses it is extremely doubtful whether continuation will produce any results. Myocrisin is well tolerated, and it is only recently that the first case of toxic reaction has been observed. This case will be described in detail since there have been no previous reports of such a reaction in the dog. It has been suggested recently that the dosages employed are unnecessarily high and that identical effects can be obtained with smaller doses. Accordingly, after consideration of our first serious reaction and because of these suggestions, we have started using exactly half the original dosage scheme. Thus our testing dose is now 0·005 gramme, followed by 6 × 0·01 gramme and, subsequently doses of 0·02 gramme. The original peak dose of 0·05 gramme is therefore now dispensed with. It is impossible to state at present whether this alteration in dosage materially affects the results since we have not so far treated a sufficient number of cases.

Case Report : Although this case is given some prominence it is not with the idea of creating the impression that such a result is likely to be common.

Subject.—Racing greyhound bitch, aged approximately three years.

Diagnosis.—Mild carpal arthritis.

Results of Treatment.—Reaction to testing dose and first four injections, nil. Two days following the fifth injection the dog was presented again with vague and ill-defined symptoms.

Symptoms.—These consisted of slight malaise and stiffness of the front part of the body. The stiffness appeared to originate from pain over the shoulder region. An unusual skin effect was apparent in this area. This took the form of a line several inches in length, caused, as far as could be ascertained, by an alteration in the normal slope of the hairs of the coat running downwards over the scapula. Both sides of the body were identical. Salicylates were prescribed in conjunction with deep heat treatment. Two days later the animal was obviously worsening although the skin lesions had disappeared. In the course of the next few days the condition revealed itself as taking the form of a polyarthritis. At its height the animal was incapable of standing, could not bear to be touched or moved and had a temperature of 106° F. All the joints became markedly swollen with fluid and the dog experienced great difficulty in swallowing, due to the acutely painful state of the mandibular joints. The most marked swelling was seen in the stifle joints. The acute state was alleviated fairly quickly with penicillin and rather late in the day by injections of B.A.L. (British Anti-Lewisite : Dimercaprol, B.P.C.), of which none was available at first. This drug is the recognised antidote to certain heavy metal poisons in the human, an example of other indications being mercury poisoning ("pink disease" in babies). Following this, the dog had residual arthritis of one stifle, the final outcome of which seemed doubtful. Since it appeared that a considerable time would be required for the treatment of this lesion, the dog was sent home. The owner, unfortunately, failed to report the fact that a serious relapse took place in the dog's general condition some time after being discharged and, seeking no further advice, the animal was evidently allowed to die. No autopsy findings are therefore available.

Discussion

It is not suggested that we have included all the indications for Myocrisin therapy in the field of canine arthritis. Wilkinson (1951) has suggested others, notably in cases of calcified intervertebral disc. To this might reasonably be added spondylosis osteoarthritica (ankylosing spondylitis) and cases of acute muscular rheumatism which fail to respond to more orthodox treatment. Indications may also be found in joints other than those mentioned, *e.g.*, the mandibular (Wilkinson), even though the exact cause of the lesion is unknown, so long as the X-ray picture suggests no obvious contra-indications to its use. These contra-indications have an alarming habit of being of a nature which cannot always

be surmised. Thus a dog with "lumbago" was found to have an air-gun slug deeply embedded in its lumbar muscles, whilst another with similar symptoms had a gramophone needle near its sacrum. Sewing needles often penetrate in queer positions and the symptoms which sometimes follow are just as peculiar.

As will be apparent from our results and those obtained by Wilkinson, the indications for gold therapy in the dog do not seem to bear much similarity with those adopted in human medicine. To the best of our knowledge, according to medical literature, the drug is little employed outside the field of rheumatoid arthritis except in non-arthritic complaints. This is surprising in view of our own findings and those of Wilkinson. The suggested mode of action of the drug may have some bearing on this, for up till now its suggested effect has been either antibacterial or as acting in some manner upon the reticulo-endothelial system. This may be more a case of wishful thinking—to explain its beneficial effects in rheumatoid arthritis when the theory of an infective agent or its toxin held sway in regard to that disease. With the advent of cortisone, however, and the advances subsequent to its discovery, it may very well turn out that a new mode of action for gold salt and similar preparations will be discovered.

So far as we are aware, acute polyarthritis is not amongst the more serious reactions to gold described in the human. There does not appear to be any manner in which an occurrence like the above can be prevented with certainty other than by scrupulous attention to the cases individually for any deviation from the normal. The initial testing dose is some measure of precaution and we hope that the suggested lower scale of dosage may be a further safeguard without in any way reducing the value of the treatment. The actual loss of the animal, whilst regrettable, is not likely to be so serious in these cases as would at first appear—for, generally speaking, the condition under treatment is unlikely to show any improvement whatsoever with other methods. Under such circumstances, what risk there is in using Myocrisin—and the risk appears to us to be small—is far outweighed by the benefit which may be obtained.

REFERENCES

FORMSTON, C., & KNIGHT, G. C. (1942.) *Vet. Rec.* **54.** 481-485.
MCCARMICK, A. J. (1943.) *Ibid.* **55.** 179.
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MILK MARKETING BOARD LEADERS

A recent announcement has been made of changes at the Milk Marketing Board, made necessary by the recent death of Mr. Ben Hinds, the late Chairman. The new Chairman is Mr. Tom Peacock, and Mr. W. R. Trehane becomes Vice-Chairman.

Mr. Peacock was first elected to the Board as a member for the N.W. region, unopposed in 1944, and was re-elected unopposed in 1946 and 1949. He was appointed Vice-Chairman in 1949. In 1938 Mr. Peacock was elected Vice-President of the N.F.U. and the following year became President. He retired from the Presidency in 1942, when he was awarded the C.B.E. He is also Chairman of the National Milk Publicity Council.

The new Vice-Chairman, Mr. W. R. Trehane, is one of the youngest members of the Board. He became a special member in 1947, following the retirement of his father. Like Mr. Peacock, Mr. Trehane comes of farming stock and himself farms. Mr. Trehane's many public duties include the Vice-Chairmanship of Dorset F.U. and membership of Dorset A.E.C. He is Chairman of the Committee's Technical Development and Livestock Sub-committee, and is also Chairman of the Board's Sturminster Newton Cattle Breeding Centre.

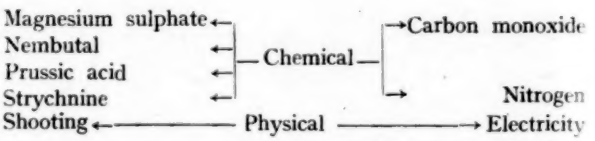
SMALL-ANIMAL EUTHANASIA*

BY

PHYLLIS G. CROFT, PH.D., M.R.C.V.S.

The destruction of dogs and cats is one of the first duties with which the veterinary student must become familiar: it therefore seems desirable to give some details of the methods available and of the pharmacology of the drugs used. Students may then be able to discuss the subject with veterinary surgeons while seeing practice and, perhaps, to make observations on different methods. Thus, by the time they qualify they will have been able to form a reasoned judgment as to the most suitable and humane method for any particular occasion.

The agents commonly used can be considered under the following headings:—



MAGNESIUM SULPHATE. *Pharmacology.*—When a saturated solution of magnesium sulphate is injected slowly into the blood stream, a descending paralysis occurs; the sensory and then the motor functions of the cerebral cortex are affected first, then the spinal reflexes and finally the myoneural junctions. Death is due to paralysis of the respiratory muscles, but loss of sensation occurs before any other symptom and hence the use of this drug is a humane form of euthanasia. Local application of magnesium sulphate to a nerve again produces, initially, loss of sensation, and therefore if some of the intended intravenous injection is actually perivascular, the effect will only be one of numbness.

Administration.—Deep narcosis results from a blood concentration of 0·01 per cent. In practice a stock solution of *saturated* magnesium sulphate is made up (solubility 1 part mag. sulph. in 1·5 parts of water) and an intravenous injection of 5 to 20 ml., according to the size of the dog, is given fairly rapidly. The dog sinks down quietly in 15 to 20 seconds as the muscles relax, and if there is any doubt as to whether the full lethal dose has been given, an intracardiac injection can be administered. The drug is absorbed very slowly from the alimentary tract and cannot be given orally as a narcotic.

NEMBUTAL. *Pharmacology.*—This drug, sodium ethyl methyl butyl barbiturate, is one of a widely used group of similar substances which act purely on the central nervous system, and in this case, preferentially on the cerebral cortex. Human subjective experience, and observations on animals, both indicate that sensation is abolished in the initial stages of the action of barbiturates, and they are, therefore, humane lethal agents for small animals. Death is actually due to depression of the vital cardiac and respiratory centres of the medulla.

Administration.—Nembutal is available in ½ and 1½ gr. capsules, and in a sterile solution containing 1 gr. per ml. Capsules are most convenient for euthanasia as the large bulk of the prepared solution required for some dogs may involve refilling a syringe. An intravenous injection of

* Paper read to the Veterinary Section of the Universities' Federation for Animal Welfare at Barford, September 23rd, 1951.

1½ gr. per 4 lb. bodyweight is given rapidly, and within a few seconds the animal sinks into deep narcosis. Again, an intracardiac injection can be given if the heart does not cease in a few minutes.

Nembutal can be given intraperitoneally, but the effect is then delayed for 10 to 15 minutes. This method is contra-indicated in cases of ascites. Oral administration is not satisfactory as the effect varies with the individual, and the onset of narcosis may be delayed for 30 minutes.

HYDROGEN CYANIDE. *Pharmacology*.—The solution used for the destruction of small animals is Scheele's 4 per cent. prussic acid. Hydrogen cyanide causes inhibition of intracellular enzymes, which in turn prevents the dissociation of oxy-haemoglobin, and the tissues thus become anoxaemic. This lack of oxygen causes an initial stimulation of the cerebrum and of the medullary centres, which is followed by a paralysis, as the oxygen tension falls. There is an initial increase in respiration, with vaso-constriction and a raised blood pressure which soon causes a reflex slowing of the heart. Respiration then becomes slow and shallow, and there is dyspnoea and finally suffocation; the heart muscle is now anoxic and the heart-beat weak. Death is due to arrest of respiration, but there is *no* evidence to show that consciousness is dulled before suffocation occurs; in fact there is an initial stimulation of the cerebrum. Convulsions and howling commonly occur after administration of prussic acid; the corneal reflex is usually present at this stage and the animal is therefore not deeply narcotised.

STRYCHNINE. *Pharmacology*.—Strychnine quickly reaches the central nervous system when taken in by mouth, and is excreted only slowly, so that its effect is cumulative; it may be found in the urine up to eight days after administration. The effects on the central nervous system are, firstly, to increase tremendously the sensitivity to afferent stimuli, and secondly, to affect muscular co-ordination, so that antagonistic groups of muscles do not relax; consciousness is not affected.

Thus a slight stimulus causes violent tetanic muscular contractions combined with acute apprehension; the muscles relax with fatigue after a time, but as soon as they become excitable again, a further spasm occurs. The cerebral cortex is not affected, and death is due to asphyxia following spasm of the respiratory muscles and fatigue of the respiratory centre in the medulla. Unconsciousness eventually occurs from anoxia, but it is known that in man strychnine convulsions are acutely painful. The animal does not cry out because the spasm of the respiratory muscles and of the glottis prevents it from doing so.

The use of hydrogen cyanide and strychnine for euthanasia must be viewed with great caution. The only permissible use of hydrogen cyanide is as a lethal agent after consciousness has been abolished by an anaesthetic. It is doubtful whether the use of strychnine can be substantiated on any ground.

There are two common gaseous agents which can be used for euthanasia, carbon monoxide and nitrogen, and both these agents are satisfactory.

CARBON MONOXIDE. This gas is rapidly absorbed by the pulmonary mucosa and passes into the blood stream where it forms a stable compound with haemoglobin, carboxy-haemoglobin. Thus the formation of oxy-haemoglobin is prevented and the tissues are no longer oxygenated; this results, in the brain, in loss of consciousness, and in the cardiac muscle in loss of function.

In an atmosphere containing 3 per cent. carbon monoxide death is almost instantaneous, and many human subjects have described the onset of carbon monoxide poisoning with smaller concentrations as painless.

Administration.—Any box which has a variable inlet and outlet can be used; it need not be completely airtight, and the carbon monoxide can be introduced as exhaust gas from a car or as coal-gas. The air outlet should be closed gradually and it is desirable to have a window in one side of the box so that the behaviour of the animal can be observed.

NITROGEN. Anoxia can also be produced by replacing atmospheric oxygen by nitrogen at the same pressure. The physiological changes are similar to those due to inspiration of carbon monoxide, and many humans have used this method to induce unconsciousness in themselves, and found it painless.

Administration.—A box similar to that used for carbon monoxide could be used. Nitrogen should be admitted from a cylinder through the lower inlet at the rate of ½ to 1 cubic foot per minute until respiration ceases; then inlet and outlet should be closed, and the animal left in the box for a further five minutes.

SHOOTING. There are two methods of killing by shooting: (i) with a free bullet, (ii) with a captive bolt. In (i) it is possible to have accidents in a restricted space if the bullet passes out of the animal, or fails to hit it altogether. In (ii) a large animal may not always be *killed* because the bolt must penetrate 2½ to 3 inches in a large dog before it hits the vital medullary centres; it will, however, undoubtedly *stun* the animal even if it does not reach the medulla, and death can be effected by intracardiac injection.

Both the captive bolt instrument and the pistol must be kept in good order to avoid accidents and to ensure efficient stunning; the humanity of either of these methods is unquestionable. Circumstances, or the wish of the client, may make shooting unsuitable, but it is efficient and painless for animals of all ages.

ELECTRICITY. Electrical cabinets are used in various dogs' homes and clinics where large numbers of dogs are destroyed. Under ideal conditions death is probably quick and painless, but the factors which determine the effect of the current are not yet completely understood, and it is possible that factors such as the resistance of the dog's coat may sometimes be responsible for failures.

The preceding methods apply essentially to the destruction of dogs, but magnesium sulphate and nembutal can also be used for cats. Intravenous injection is more difficult in the cat than in the dog, and a chloroform box is therefore very useful for cats; dogs struggle violently against chloroform but cats usually take it quietly, provided that the concentration of the vapour is increased gradually. The air inlet should be closed slowly, and it is important to agitate the air in the box after use, so that the next patient is not plunged into an atmosphere of concentrated chloroform vapour. Cats can be destroyed by the gaseous agents and they can also be shot, if adequate restraint is available; reflexes after shooting may be rather prolonged and violent in cats, but this does not make the method any less humane. Electrical methods are not suitable because the resistance of the cat's fur is very high.

TECHNIQUES

Intravenous injection often seems difficult, but the method can be practised by giving the animal an intraperitoneal anaesthetic dose of nembutal, and when consciousness is lost, trying the intravenous route. A savage dog can be

treated similarly, and it is difficult to imagine circumstances in which this method cannot replace the intrathoracic injection of prussic acid. Intracardiac injections are good in theory, but are not satisfactory in practice in the conscious animal, because the position of the relatively small canine or feline heart is not sufficiently constant. Injections into the atlanto-occipital space are also satisfactory in theory, but in practice the technique is difficult. If an animal is too wild to handle, it may be possible to anaesthetise it by spraying its face with chloroform from a Flit spray, or similar piece of apparatus.

SUMMARY

It is impossible to obtain *absolute* proof of pain in an animal, since it cannot speak, but a knowledge of pharmacology, intelligent observation, and comparison with man can provide a great deal of information. Surely it is the duty of veterinary students to learn all that is known about this subject, so that, when they are entrusted with the humane destruction of an animal in any particular set of circumstances, they can decide on a *reasoned* plan of action.

REVIEW

[**Hormones.** A SURVEY OF THEIR PROPERTIES AND USES. Published by direction of the Council of the Pharmaceutical Society of Great Britain. The Pharmaceutical Press, 17, Bloomsbury Square, London, W.C.1. June, 1951. Pp. 220. Price 35s.]

This useful little book has been written to provide a short account of those hormones with fairly definite pharmacological effects and therapeutic applications, which might be useful to pharmacists, medical practitioners and students of medicine. After a brief glance at the history of endocrinology, the book gets down to an account of the physiology of the various glands—thyroid, parathyroid, pancreas, pituitary, adrenal and gonads—describing the normal function and effects of dysfunction in each case. The chemistry of the hormones is then described at considerable length in two sections—steroid and non-steroid—the former including references to various "artificial" hormones such as stilboestrol, etc.

A chapter on "Standardisation" goes into methods of biological assay and has a useful discussion of the units used to express the activity of the various preparations. Then follows an interesting discussion on actions and uses in human medicine with details of dosage and administration and there is a brief dissertation on the preparation of hormones for pharmaceutical purposes. Details are given of the numerous injections, solutions, ointments, etc., which are available commercially, including the composition and strengths of the various preparations and the names of the suppliers.

The whole book is thoroughly well produced and illustrated and is well documented. Though it does not attempt to deal with veterinary aspects of endocrinology it should prove a useful reference book to the veterinary pharmacologist as well as to the student of physiology. The sections on chemistry may prove somewhat too abstruse for the taste of many veterinary practitioners but they would undoubtedly find much to interest and enlighten them in reading this book. All who are concerned with the application of hormonal products in practice or even research undoubtedly would benefit from a closer acquaintance with its pages.

CLINICAL COMMUNICATION

OPERATION FOR CORRECTION OF LATERAL PROTUSION OF THE TONGUE IN THE DOG

R. ST. C. DENT,

N.C.D.L., NORTHERN AREA HOSPITAL, ECCLES, LANCS

Subject.—King Charles Spaniel; bitch; age five months.

History.—Clinical examination revealed the pup to have a lateral protrusion of the tongue through the left premolars. The animal had full control of the tongue except during extension when the direction was in the region of the left eye. There was no obvious discomfort, unusual salivation or difficulty in eating. To take liquids the head was inclined to the left and turned slightly to the right, to bring the tongue in line with the surface of the liquid. A slight necrosis of the left lower lip could be seen, due to the wet under surface of the tongue being in constant contact with it. This condition deteriorates with time.

Anaesthesia.—Anaesthesia was induced by the intravenous injection of nembutal, using the recurrent tarsal vein. Care must be taken to ensure that the depth of anaesthesia does not proceed beyond the stage when the tongue reflex is lost, because the organ will become fully relaxed and the abnormal curvature will disappear. With a pair of peritoneal forceps an amount of underlying superficial muscle on the right-hand side was gathered—the amount can be judged by that required to bring the tongue in line with the mouth (see diagram).

Anaesthesia was then completed and the operation continued.

Operation.—With a curved pair of scissors, the piece gathered for excision was removed. This left an elliptical wound with considerable haemorrhage: this was controlled by picking up the small vessels with artery forceps and applying cold swabs. The lips of the wound were drawn together with interrupted sutures of No. 5 nylon or silver wire, spaced about ¼ inch apart. If the bleeding persists drips of liq. adrenal hydrochlor., 1:1,000, applied to the wound will prove effective. The surface edge of the tongue will show a small corrugation but this can be ignored as it will level out by the time the sutures are ready for removal, in about seven days.

Recovery.—Uneventful.

Erratum.—We regret that, through a printer's error in making a proof correction of the article in our last issue by F. W. Priestley and R. W. White: "A note on the isolation, from serum, of a heat-stable growth factor for the contagious bovine pleuro-pneumonia organism," the penultimate paragraph prior to the Discussion was rendered unintelligible. It shou'd read: "Growth also occurred in the globulin solution (G), but since the growth factor is not precipitated by ha'f-saturation with ammonium sulphate and since it was not present in the globulin coagulum (GC) or in the filtrate from the coagulated g'obulin so'ution (GF), it seems probable that it was brought down in the globulin precipitate purely mechanically." (*Vet. Rec.* **64.** 260.)

THE VETERINARY RECORD

MAY 10, 1952

FOOT-AND-MOUTH DISEASE

FOR the past seven months, except for a brief respite in mid-winter, the eastern and south-eastern counties of England have been subjected to successive invasions of foot-and-mouth disease. With the recent appearance of the disease in Scotland and Wales, it is opportune to say something about the way in which this serious situation developed and how it is being controlled.

During this period (up to the time of writing) approximately 250 outbreaks of the disease have been confirmed in widely separated areas, mainly within a short distance of our eastern and southern coasts, and it is evident from their distribution and history that a large proportion of these were primary outbreaks due to fresh invasions from the Continent, each constituting a grave threat to our highly susceptible farm animals.

The Continental epidemic originated in Germany during the early summer of 1951 and soon spread to Denmark, Holland, Belgium, and then through Luxembourg to France. By December, 1951, there had been a progressive build-up of infection in all these countries and outbreaks were occurring at the rate of over 20,000 per month in Germany and Belgium and at a fairly high level in Denmark, Holland and France.

In the face of this severe epidemic on the Continent it is not surprising that infection eventually reached England, the first outbreaks occurring in the eastern counties on November 14th. Thereafter, apart from a slight recession in mid-winter, there was a succession of outbreaks in the eastern counties and later in the south-eastern counties, the latter area becoming involved as the disease spread westwards through France. These outbreaks coincided with the autumn and spring migrations, many of them occurring along the recognised migration routes, and there is little doubt that migrant birds were responsible for them.

That these outbreaks were speedily brought under control was in no small measure due to the swift and energetic action of the Animal Health Division, whose veterinary staff worked unceasingly and with conspicuous success throughout this anxious time to localise and eradicate the disease. The success of their efforts and of the policy which they were carrying out can be gauged from the fact that in a high proportion of initial outbreaks there was no secondary spread.

However, despite these achievements and the full support of informed and official farming opinion, some criticism of the policy of slaughter, which has served us so well in the past and which has more than justified itself on this occasion, has been forthcoming and this may not be an inappropriate time to give a few reasons why this policy is the best and most effective for this country.

In the first place it must be remembered that foot-and-mouth disease is not endemic in Great Britain. For long periods we are entirely free from it but from time to time the disease is introduced, for instance, in infected imported meat or through the medium of migratory birds. Once this most contagious of all known diseases has obtained a foothold amongst our highly susceptible livestock, it spreads very rapidly and cannot be held in check under ordinary farming conditions. The affected animals are active manufacturers of virus and if they were not slaughtered immediately the disease would soon become widespread and cause great loss to the farming industry and to the country. Although many animals recover naturally from the disease, it does reduce the milk supply and the output of meat, and if it were allowed to run riot the cumulative effect of the loss of milk and meat to the nation would be very great and far exceed the cost of the slaughter policy. For example, in Germany, where a policy of isolation and vaccination was followed during the 1937-38 series of outbreaks, the disease is estimated to have cost £83,000,000, whereas the average cost to this country in compensation to farmers during the period 1941-51 inclusive, was approximately £222,000 per annum.

It is of interest also to record that the slaughter policy is not peculiar to this country. It is the policy of most of the progressive countries, including the U.S.A., Canada, South Africa, Norway, Sweden, Eire and Northern Ireland. In the countries where it has not been adopted the reason has been that the number of animals affected was so large or invasions of disease so frequent that slaughter was economically impracticable.

Critics of the slaughter policy frequently ask why it cannot be replaced by a policy of vaccination and point out that this method of control appears to have been adopted in certain countries with a fair measure of success. In considering the question of vaccines a few salient facts should be borne in mind.

In the first place, vaccines are relatively expensive to produce. Secondly, in addition to the recognised main types of virus, there are a number of variants and if a vaccine is to be of any value in an outbreak it must be prepared from the type of variant or virus responsible for the particular outbreak, a fact which complicates enormously the task of preparing and providing reserve supplies of vaccine. Polyvalent vaccines have been produced but so far they have not proved very effective. Thirdly, the immunity conferred by these vaccines is of relatively short duration, probably not more than six months; consequently, revaccination would be necessary at fairly short intervals if a fair measure of protection were to be achieved and would be a costly business.

Moreover, a vaccinated animal may well reach a stage when its resistance, whilst sufficient to mask the lesions of the disease, is not adequate to prevent the multiplication of virus and its dissemination from the animal's body. Should such an animal contract the disease it may well be a danger to non-vaccinated stock in spite of the fact that it shows no visible evidence of the disease. It is this aspect of vaccination which makes it undesirable to permit individual farmers to vaccinate their animals, particularly in a country such as this where mass vaccination is not practised.

Bearing these points in mind, it is obvious that vaccination cannot be a highly efficient method of control although it is of some value in reducing losses in those countries where the disease is endemic or which have land frontiers across which infection readily can be introduced. Further confirmation of the inadequacy of vaccination as a policy is to be found by a study of the course of the present epidemic of foot-and-mouth disease on the Continent as compared with the position here.

In practically all the Continental countries involved in the recent epidemic vaccination had been practised on an extensive scale; the vaccines employed, however, failed to arrest the progress of the disease because the invading virus was of a type different from those which had been used in the preparation of the vaccines.

No figures are available to show the extent of the losses

in Europe caused by this recent epidemic but they must be very high, bearing in mind that in 1938 in Germany alone, as stated previously, the estimated cost was £83,000,000. In England, during 1951, there were 116 outbreaks and the compensation paid for livestock slaughtered was £310,284—figures which indicate that the slaughter policy is not only the most effective but the most economical way of eradicating the disease from this country.

Nevertheless, however effective our precautions and methods may be, these visitations of foot-and-mouth disease once again have demonstrated to us that despite our insular position we are still vulnerable when the disease is raging in Europe, particularly along the western coastal areas, and no action which we can take in this country can prevent infection from reaching our shores from time to time.

If this recurring threat to our livestock is to be reduced or removed it seems that the problem of the control of foot-and-mouth disease and other contagious animal diseases must be tackled on a wider basis than at present. Control must be exercised not only on a national but on an international scale.

ABSTRACTS

Milk Yield in Relation to Infection with *Str. agalactiae* *

The work was planned with the intention of obtaining further information as to whether (a) susceptibility to infection was associated with yielding capacity and (b) what the effect of infection was on milk yield. Details are given of the methods employed to achieve this end. Bacteriological examination of the milk was carried out with special reference to *Str. dysgalactiae, Str. uberis,* Group G streptococci, haemolytic staphylococci, *C. pyogenes* and *Brucella abortus*. The influence of these organisms was considered *en masse* and individually. The evidence suggested that animals which ultimately became infected with *Str. agalactiae* produced more milk before infection than did controls over a corresponding period. This, it is suggested, may mean either that the strain of milking predisposes the udder to infection, or that there is a direct relationship between inherited ability to produce high yields and susceptibility to infection. In a reasonably well-managed herd the average loss in yield in the first lactation, should infection occur, may be as much as 24 per cent.

N. S. B.

* **Milk Yield in Relation to Infection with *Str. agalactiae*.** MacLeod, D. H., & Wilson, S. M. (1951.) *J. Dairy Sci.* **18.** No. 3.

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Antibiotics and A.I.*

The addition of antibiotics to diluted bull semen does not increase its fertility except when it is from relatively less fertile bulls.

An experiment using penicillin and streptomycin showed that when treated semen was used the number of cows returning to service after abnormally long periods (over 24 days) was much reduced.

Perhaps some infectious agent in the semen able to produce metritis or early embryonic death was controlled by the antibiotics.

J. A. L.

* **The Effect of Antibiotics on the Fertility of Bull Semen and their Relationship to the Oestrous Cycle Length of Dairy Cattle following Artificial Insemination.** Olds, Oliver, & Seath. (1951.) *J. Dairy Sci.* **34.** 966-970.

Insemination of Low-fertility Cows with Semen from Bulls of Another Breed*

A very limited experiment using Guernsey and Holstein cattle showed that there was no advantage in using a bull of different breed on cows which had repeatedly returned after insemination with semen of their own breed.

J. A. L.

* **The Response of Low-fertility Cows to Insemination with Semen from Bulls of Another Breed.** Christian, Ulberg, & Casida. (1951.) *J. Dairy Sci.* **34.** 988-991.

IN PARLIAMENT

Lords Debate Home Food Production

The emphasis on meat placed by the Government in its recent statement to the House of Commons (*Vet. Rec.* **64.** 268) was underlined in the debate "in another place" on Wednesday of last week, on Lord Llewellin's motion on home food production. Lord Woolton threw fresh light on plans for producing more "pink meat" as well as red—the Government, he said, had become less particular about the colour. On the basis that food for animals derived from our own grass could be increased by 15 per cent. in four years and the yield from other crops by 5 per cent., he said there was scope for rearing between 300,000 and 400,000 more calves annually for beef production, a continuing increase in our sheep population and the release of another 1,000,000 acres of grass land, after next June, for tillage. This might well build up an increase of 250,000 tons in meat production by the fourth year—chiefly pig meat, with further increases in beef and mutton to follow.

Value of Grasslands

Lord Melchett, in a maiden speech, said that by expanding the agricultural industry we could produce at least two-thirds of our own food. It would be foolish to build up our herds and flocks while relying on uncertain and expensive supplies of feeding-stuffs from abroad. In considering substitutes for these imports grass was a crop of pre-eminent importance. An increase of 25 per cent. in production on our grassland would be the equivalent of 4,000,000 tons of coarse grain which would otherwise have to be imported. The figure of 25 per cent. was a modest one compared with the actual increases obtained at such research stations as the Hannah research institute in Scotland. It was also possible to produce more grain from our existing cereal acreage.

Lord Lovat, who said that he had just returned from South Africa where he had been judging British cattle at Johannesburg show, pointed out that the belief that there were vast untapped areas of land overseas capable of producing large surpluses of meat at cheap prices was an entirely fallacious theory, and if taxpayers' money was to be spent abroad on random and often impractical ventures, pilot schemes should be set up first. In this country only two-thirds of the available land was being used to produce food. He congratulated the Minister on giving a long-term policy to enable hill farmers to develop the potential that existed on their land.

The Irish Free State had tackled the farming problem with success. As a race the Irish were not very distinguished agriculturists in working their arable land but they knew the value of their grass and a constant rainfall. They were shipping beef to the United States, Canada and Europe, and were sending to the British Isles about 400,000 store cattle annually—a remarkable contribution to the nation's food supply. Scotland could do the same but in his part of the country glen after glen was being taken over either by the Forestry Commission or for hydro-electric development which was flooding valleys and misusing the land. This, and the misuse of arable land for buildings, aerodromes and rifle ranges, was an enormous source of interference. In Scandinavia and in Switzerland it was a crime to drown land and in Holland it was almost impossible to build a house if the site could be cultivated in any way. In Britain we must also realise how vitally important every acre was to the population. He hoped the Government would take action to remedy this carelessness and to protect our vital heritage.

Lord Carrington, Parliamentary Secretary, Ministry of Agriculture, in the course of his reply for the Government, said that the Government were doing everything possible to keep good land for food production and would see whether the considerable expanses of common-land which did not appear to be much used for amenities

could be brought into production. It was intended that the subsidy on heifer calves would only be paid on calves of recognisable beef type and this would exclude a large number of dual-purpose calves. The Government was still working out a practicable scheme and would be consulting the farmers' representatives.

The new subsidy on phosphatic fertilisers should play an important part in raising the yield from grassland. We had to keep more animals on a smaller acreage and it could be done by the efficient management of grass. The small farmers, who were dependent on imported feeding-stuffs, were hardest hit by the high prices but the Government agreed that it was desirable that the feeding-stuffs subsidies should be removed progressively with the object of bringing the rationing scheme to an end. This could only be done if more feeding-stuffs were grown at home. Advance information would be given to pig-breeders about future feeding-stuff rationing scales.

Under the Hill Farming and Livestock Rearing Acts, 4,500 schemes had been started in England and Wales, covering about 1,500,000 acres and totalling in value £1,750,000. Grants amounting to £720,000 were approved under the Marginal Production Scheme in the year ending on March 31st, 1952.

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Questions

Foot-and-Mouth Disease

Sir L. ROPNER (May 1st) asked the Minister of Agriculture whether he has considered the general use of vaccine for the immunisation of cattle against foot-and-mouth disease ; and whether he will make a statement on the matter.

Mr. CROUCH asked the Minister of Agriculture what progress in research to find a vaccine to prevent foot-and-mouth disease has been made.

Brigadier MEDLICOTT asked the Minister of Agriculture if he is aware of the concern caused by the loss of food resulting from the slaughter of animals affected or threatened by foot-and-mouth disease ; and if he will confer with the leaders of the agricultural industry on the desirability of introducing a policy of immunising cattle against this disease.

Sir T. DUGDALE : The principal drawbacks of an immunisation policy are that no known vaccine protects against all the types of the foot-and-mouth disease virus to which our livestock are exposed and that the protection against particular types is of relatively short duration. It would, therefore, be impracticable to keep all, or even most, of the susceptible animals in this country in a satisfactory state of immunity.

On the other hand, the immunisation of animals after an outbreak has occurred is not effective in preventing the spread of disease, because it takes two or three weeks after inoculation before an immunity is produced. Moreover, the presence of immunised animals amongst our livestock would tend to perpetuate the disease, since an immunised animal may become infected and while showing little or no signs of illness may be capable of passing on infection to other animals.

Consequently, an immunisation policy would lead to foot-and-mouth disease becoming established in this country and is incompatible with the policy of stamping out infection by slaughter which, I am satisfied, is the cheapest and most effective in the circumstances of this country and which has the support of the leaders of the agricultural industry.

Research into foot-and-mouth disease, including the use of vaccines, is given the fullest backing through the Agricultural Research Council and through my Department.

Mr. HURD (also on May 1st) asked the Minister of Agriculture if he will make a statement on the extent of the recent outbreaks of foot-and-mouth disease ; and if he will give an assurance that the spread of infection is now under control.

Sir T. DUGDALE : During the winter and spring outbreaks of foot-and-mouth disease have occurred in the eastern and south-eastern counties of England. Since April 1st there have been 43 outbreaks in Cheshire and Staffordshire, and fresh centres of infection giving rise to a further 16 outbreaks have appeared in Suffolk, Essex, Hampshire, Sussex, Berkshire, Aberdeenshire and Angus. Except in Cheshire and Staffordshire, there has been very little spread of infection from the initial outbreaks. Although the position in Cheshire and Staffordshire is causing some anxiety, I am confident that the usual measures, which are being promptly and vigorously applied, will be successful in bringing the disease under control.

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Exhibition Pigeons (Fowl Pest)

Mr. HAY (May 1st) asked the Minister of Agriculture if he will exempt exhibition pigeons from the provisions of the Poultry Pens, Fittings and Receptacles (Disinfection) Order, 1952 (S.I., 1952, No. 437).

Sir T. DUGDALE : No. Although pigeons do not often contract fowl pest, they are susceptible to the disease, and my veterinary advisers consider it very desirable that the receptacles in which they have been conveyed to exhibitions shall be cleansed and disinfected in the same way as other poultry receptacles.

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Slaughtering Facilities, Norfolk

Mr. DENYS BULLARD (April 30th) asked the Minister of Food if he will give an assurance that the arrangements for slaughtering fat stock in Norfolk are now adequate to prevent the holding back of fat animals, particularly bacon pigs, on the farms in the event of serious outbreak of foot-and-mouth disease; and what steps he has taken to avoid a repetition of the serious hold-up which occurred in November last.

Major LLOYD GEORGE: We are as anxious as the producers that delays should be reduced to a minimum and all possible emergency arrangements are made to increase slaughtering capacity in an infected area. But when normal movements of fat stock are interrupted, some delay may be inevitable.

Mr. BULLARD: Will the Minister bear in mind the great dislocation that is taking place in the whole of the pig industry in East Anglia because of the few bacon factories in that area, and as we hope to increase the number of pigs there will he try to improve the existing slaughterhouse facilities, some of which are extremely primitive, and will he include in his review the possibility of authorising the building of another bacon factory there?

Major LLOYD GEORGE: My hon. Friend knows that the question of a bacon factory in East Anglia is under review at the moment. On the question of slaughterhouses, whilst some are being built at the moment, I am sure my hon. Friend will realise that in the case of a county like Norfolk, a great deal of slaughtering is done outside the county, in the Midlands, and when there are emergencies of this character it is almost impossible to deal with them adequately and completely. If that were to be done we should have to build more slaughterhouses in the country than we could possibly maintain. I might add that I fully appreciate all the considerations in this matter.

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Vaccine (Calves)

Mr. PETER FREEMAN (April 28th) asked the Minister of Health to what extent calves which have been injected with smallpox virus from which vaccine is produced are eventually sold to butchers for human consumption as veal.

Mr. CROOKSHANK: So far as calves are now used at all it is by commercial makers of vaccine lymph. I am making enquiries and will communicate with the hon. Member as soon as possible.

NOTES AND NEWS

Diary of Events

May 14th.—Meeting of the Editorial Executive, B.V.A., 2.30 p.m.

May 14th.—Annual General Meeting of the Herts and Beds Division, B.V.A., and the President's Luncheon, at Luton (The George Hotel), 1 p.m

May 14th.—Spring Meeting of the Eastern Counties Division, B.V.A., at Colchester (Red Lion Hotel), 11 a.m.

May 15th.—Meeting of the South Eastern Division, B.V.A., at Maidstone (Royal Star Hotel), 6 p.m.

May 17th.—Annual General Meeting of the Society of Women Veterinary Surgeons, at the Zoological Gardens, Regent's Park, London, N.W.1, 2 p.m.

May 21st.—Meeting of the Scottish Branch, B.V.A., at Glasgow (North British Station Hotel, 2.30 p.m.

May 22nd.—Annual General Meeting of The Society of Practising Veterinary Surgeons, at the Ho'born Restaurant, London, W.C.1, 2.30 p.m.

May 23rd.—Meeting of the Royal Counties Division, B.V.A., at Reading (Caversham Bridge Hotel), 2.30 p.m.

May 24th.—R.V.C. Athletic Club Sports Day, Goring Recreation Ground, 2 p.m.

May 27th.—Annual General Meeting of the National Veterinary Benevolent and Mutual Defence Society, at Manchester (The Midland Hotel), 2.30 p.m.

June 4th.—109th Annual General Meeting of the Royal College of Veterinary Surgeons, at 10, Red Lion Square, London, W.C.1, 12 noon.

June 4th.—Annual General Meeting of the Victoria Veterinary Benevolent Fund, at 10, Red Lion Square, London, W.C.1,—immediately following the above.

June 4th to 6th.—Meetings of Committees and Council, R.C.V.S., at 10, Red Lion Square, London, W.C.1.

June 12th.—Annual Meeting of the R.A.V.C. Golfing Society, at the North Hants G.C., Fleet.

Sept. 8th—13th.—Seventieth Annual General Meeting and Congress of the British Veterinary Association, at Harrogate.

XUM

R.C.V.S. Examinations

May 12th.—R.C.V.S. Pharmacology, etc. Examination (Revised Syllabus): Written Examination.

June 5th/6th.—D.V.S.M. Written Examinations at Edinburgh.

June 26th/27th.—R.C.V.S. Membership Written Examinations.

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R.C.V.S. Council Election

The Registrar, Royal College of Veterinary Surgeons, would remind members who have not yet voted that completed voting papers must reach him *on or before Monday, May 19th.*

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FOOT-AND-MOUTH DISEASE

COUNTRY-WIDE STANDSTILL ORDER

"No Worsening of the Position"

On Tuesday last the following statement was issued by the Ministry of Agriculture:—

The movement of some more of the animals which were in contact with the consignment of calves which became infected on their way to Scotland has now been traced. Some passed through Banbury market and have since been dispersed over a very wide area. It seems likely that other markets may also have dealt with contact animals. It is therefore necessary to control the movement of stock in the remainder of England at present outside the controlled area, and in Wales.

Accordingly, a new Order has been made applying the provisions of the Foot-and-Mouth Disease (Controlled Areas Restrictions) General Order of 1938 to the whole of England and Wales in addition to that part of Scotland already under control, that is, that part of the mainland south and east of the Caledonian Canal.

The Order comes into effect at midnight to-night. The Order controls the movement of animals into, within, and out of the area referred to, and prescribes that no market or sale of animals shall be held in the area unless it is restricted to fat stock for immediate slaughter and is licensed by the local authority (the statement concluded).

A spokesman of the Ministry of Agriculture said: "This does not denote any worsening of the foot-and-mouth disease position; it means only that there has been a widening in the area in which contact cattle have moved." On Tuesday last the number of outbreaks confirmed since November 14th was 248. More than 28,000 animals have been destroyed, including 14,326 cattle, 7,759 sheep, 6,401 pigs and 20 goats.

Outbreaks in Jersey

The Ministry announces that in consequence of outbreaks of foot-and-mouth disease in Jersey an Order has been made prohibiting the importation of cattle, sheep, goats, or any other ruminating animals or swine, as well as hay or straw, into Great Britain from the Channel Islands.

In our Parliamentary section we give the extended reply made in the House of Commons last week, by the Minister of Agriculture, to a number of questions on the foot-and-mouth disease position, also on Government control policy in relation thereto—a matter which is dealt with also in the editorial columns of this issue.

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PERSONAL

Births.—Bunker.—On April 25th, 1952, at Liskeard Nursing Home, to Margaret Mary (*née* Pedlar), wife of J. A. Bunker, B.Sc., M.R.C.V.S. —twin daughters.

Overton—On April 22nd, 1952, at South Mead Hospital, Bristol, to Elizabeth (*née* Storr), wife of Michael Overton, M.R.C.V.S., a son—David George.

Thompson.—On April 11th, 1952, at Petersfield, Hants, to Elsa (*née* Dunlop), wife of Peter K. Thompson, B.Sc., M.R.C.V.S., a daughter —Susan Jane.

R.C.V.S. OBITUARY

Bishop, James, Elmwood, Cupar, Fife. Graduated Glasgow, December 23rd, 1891. Died April 11th, 1952; aged 81 years.

Fitzgerald, John Charlton, Deputy Territorial Veterinarian, Hawaii, U.S.A. Graduated London, July 15th, 1902. Died April 15th, 1952.

Fyrth, Walter, T.D., Major R.A.V.C. (T.A.) (retd.), of 3, Gables, King's Saltern Road, Lymington, Hants, formerly of Bridport, Dorset. Graduated London, May 29th, 1894. Died April 23rd, 1952; aged 79 years.

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Mr. James Bishop, M.R.C.V.S.

We regret to record above the death of Mr. James Bishop, who followed his profession as a veterinary surgeon for a number of years in Glasgow district before he took up farming in the Coupar Angus area. At the end of the First World War he sold his holding, and thereafter resided in the Station Hotel, Perth, for many years. For about 18 months he was in practice with Mr. John Brown, M.R.C.V.S., Perth, and finally retired in 1921. While in Perth his services were in demand at horse sales in which he acted as referee in disputes which occurred. "For a time after he came to Cupar," says the *Fife Herald*, "Mr. Bishop regularly attended the weekly markets, where he was well known to farmers and merchants. Very tall and erect, he was an outstanding figure. He is survived by his wife, who is identified with the Girl Guide movement."

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Major Walter Fyrth, T.D., M.R.C.V.S.

We deeply regret to announce, also, the death of Major Walter Fyrth, M.R.C.V.S., who formerly resided at West Allington, Bridport, where for many years he was in practice as a veterinary surgeon.

A veteran of World War I, Major Fyrth was one of the first to land in France with the British Expeditionary Force.

At one time, Major Fyrth served as a territorial officer with the Dorset Field Artillery, and was actively associated with the Bridport branch of the British Legion.

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Funeral of Colonel P. J. Simpson, of Maidenhead

Lieut.-Colonel Percy James Simpson, D.S.O., T.D., J.P., F.R.C.V.S., of Knowle Croft, Shoppenhangers Road, Maidenhead, Past-President of the R.C.V.S. and the B.V.A., whose death we recorded with deep regret in our last issue, was buried on Monday, April 28th, after a service at St. Mary's Church.

The service was conducted by the Bishop of Reading (the Rt. Rev. A. G. Parham), who served as a chaplain in Egypt with the Colonel in the 1914-18 war.

The family mourners were: Mrs. Simpson (widow), Mr. and Mrs. John Simpson (son and daughter-in-law), Mrs. Elphick (sister-in-law), Mrs. McCarthy Maine (sister-in-law), Mr. D. Elphick (nephew), Miss E. Elphick (niece), Miss M. Elphick (niece), Mrs. Locksmith (cousin), Mrs. Bodell (sister-in-law), Miss M. Hewitt (cousin).

The very large general company included many representatives of veterinary and other organisations: The President and Council of the Royal College of Veterinary Surgeons were represented by Mr. Howard Dawes (Past-President), Professor L. P. Pugh, and Mr. W. G. R. Oates (Registrar); the President and Council of the British Veterinary Association were represented by Mr. H. E. Bywater and Major R. C. G. Hancock, Mr. Bywater and Major Hancock also representing the Central Veterinary Society and the R.S.P.C.A. respectively; Major R. F. Wall (Central Veterinary Society); Mr. Horace Bell (Royal Counties Division, B.V.A.), and Mrs. Bell; Brigadier A. G. Hevenigham, Director, A.V. & R.S. (representing the Colonel-Commandant and all ranks R.A.V.C.); Mr. John Cameron (Ministry of Agriculture); Mr. G. P. Male (Court of Governors, Royal Veterinary College), Professor J. B. Buxton (Principal) and Mr. H. W. J. Adams (Secretary) (Royal Veterinary College); Mrs. Male and Mrs. Buxton; Professor G. H. Wooldridge and (representing the Victoria Veterinary Benevolent Fund Ladies' Guild) Mrs. G. H. Wooldridge; Mr. Cyril W. Francis (Victoria Veterinary Benevolent Fund); Colonel W. T. Forsdike (representing the Marquess of Carisbrooke and the Stewards of the Greyhound Racing Club); Mr. S. J. Abbott, Mr. E. Edwards, Colonel M. G. S. Hopson, Colonel R. A. C. L. Leggett and Mr. A. C. Thomson (representing the British Legion); Mrs. R. Maffett, Mrs. Potter and Mrs. C. Walker (British Legion, Women's section); Messrs. W. A. Bannister (Secretary), F. G. Edmunds, G. R. Gardner and L. Gill (Ivy Leaf Club); Mr. M. Cooke and Miss F. M. Theakstone (Civil Defence); Mr. H. J. Hoskins (Constitutional Club); Mr. F. A. Venables (Maidenhead United F.C.); Mr. C. A. Meade (Budgen's Stores).

Captain F. Clifford Armitage (Chairman of Maidenhead Magistrates), Mr. K. Ruffe Thomas (Clerk of the Magistrates), Mr. H. E. Pickman (Deputy Town Clerk), Mr. E. J. Braby (Assistant Chief Constable of Berkshire), Police Inspector A. East and Police Superintendent A. A. Walker.

Mrs. Arter, Mr. and Mrs. F. R. Avery, Mr. E. Beal, Mr. H. Bingham Jones, Mrs. Bodle and Miss Joan Bodle, Mr. and Mrs. A. F. Breakspear, Mrs. G. Carew, Mr. C. H. Catliff, Mrs. Clifton, Mrs. Delany, Major J. J. Dunlop, Mr. G. H. Edwards, Dr. J. T. Edwards, Miss E. Elphick and Dr. D. Elphick, Mrs. Eve, Miss Gibson-Sugars, Mr. G. E. Goodwin, Colonel and Mrs. A. E. Marnham, Alderman and Mrs. E. B. Norris, Mr. G. Paulin, Mr. Owen Price, Mrs. and Miss Purchase, Mrs. and Miss Rance, Dr. and Mrs. Rupert Scott, Mrs. Phil Thompson, Mr. and Mrs. Sydney Thompson, Mr. R. E. Ticehurst and Mr. C. M. Walton.

Members of the Berkshire Yeomanry Old Comrades' Association (Midland Branch), of which Colonel Simpson was President, formed a guard of honour outside the church. They were: Messrs. L. Aldridge, J. E. Arnold, W. Braxton, F. Carter, J. Darville, G. Davis, H. Dodd, R. Hedges, J. Laurie, R. Morrish, A. E. Parks, F. R. Piercey, R. Rowsell, D. Taft, H. E. Woodhouse.

Captain A. Henson represented Brigadier H. P. Crosland and Reading District branch of the Berkshire Yeomanry Old Comrades' Association. He was accompanied by Mr. R. Bishop and Mr. W. Bond, of Reading branch.

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VETERINARY SURGEONS ACT, 1948

Supplementary Veterinary Register

The Council of the Royal College of Veterinary Surgeons has directed Mr. W. G. R. Oates, as Registrar under the above Act, to register in the Supplementary Veterinary Register the names of the persons set out below.

Date of Registration: *May* 1*st*, 1952.

ARNOLD, Edward, 33, Bromley Common, Bromley, Kent.

DREWE, Kerrick Ivor Stanley, Liskeard Road, Callington, Cornwall.

LLOYD-JONES, William Llewellyn, The Denes, Station Road, Preston Park, Brighton.

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LEGAL NOTES

Another Successful Royal College of Veterinary Surgeons Prosecution

On Wednesday, April 16th, 1952, Mr. Fred Haller, of 43, Church Street, Conisbrough, appeared before the West Riding Justices, Doncaster, on the following charge:—

"Between the 1st day of October, 1951, and the 31st day of December, 1951, at the Parish of Conisbrough, not being registered in the Register of Veterinary Surgeons or registered in the Supplementary Veterinary Register, did practise veterinary surgery to wit the diagnosis and treatment of a greyhound bitch the property of one William Crabtree of 97, Daylands Avenue, Conisbrough, contrary to Section 5 of the Veterinary Surgeons Act, 1948."

Mr. F. Wilberforce Bridge appeared to prosecute on behalf of the Royal College of Veterinary Surgeons.

Mr. A. H. Whitwam, of Mexborough, appeared for the defendant.

For the prosecution, the owner of the greyhound bitch gave evidence that, after a normal confinement, the bitch had a persistent discharge five weeks later, and he consulted Mr. Haller, who examined the bitch and prescribed syringeing with some lotion, which he told the owner to call for the following day. The owner, having collected the lotion, carried out the treatment prescribed. He saw Mr. Haller, and obtained another bottle of lotion, and some powders. He then obtained a third supply of lotion.

The discharge stopped temporarily, but on its recommencing he consulted a veterinary surgeon, Mr. Watters, of Doncaster, who successfully treated the bitch.

Mr. Watters also gave evidence, and was cross examined by the defence as to when either he or his assistant attended the Branch Surgery at Mexborough. On the Bench asking the purpose of such cross examination, the defence said it was in view of one head of the defence to be raised later, namely, First Aid.

Mr. Whitwam then opened the case for the defence. He at first submitted that no offence had in fact been committed, saying that it was necessary for the prosecution to prove that the defendant had practised "the art and science of veterinary surgery and medicine," whereas he had not, in fact, done any such thing. All he had done was to supply a quantity of lotion and some powders just exactly in the same way as would have been done if Mr. Crabtree had gone to Boots' Cash Chemists or some other store dealing in animal remedies. This was not practising veterinary surgery or medicine, it was merely selling manufactured commodities. It was true that Mr. Haller had made up the lotion himself, but there was nothing in the Act which prohibited a man from making and selling patent remedies for animals or human beings so long as certain regulations as regards dangerous drugs were observed.

Mr. Whitwam then submitted his second point. He referred to Part I of the First Schedule of the 1948 Act which set out certain treatments and operations which might be given or carried out by unqualified persons. Included in these was:—

"The rendering in an emergency of first aid for the purpose of saving life or relieving pain."

Mr. Whitwam submitted that on Mr. Watters' own evidence the services of qualified veterinary surgeons in the Conisbrough district were only infrequently available. Mr. Crabtree had brought his bitch to Mr. Haller in a state of obvious pain and distress and Mr. Haller felt it his duty to relieve that pain. This he had done and, in the submission of Mr. Whitwam, he had done no more than administer that first aid to relieve pain and distress which was visualised in the exceptions provided for in the Schedule to the Act.

In reply, Mr. Bridge, for the R.C.V.S., dealt with the two points raised as follows.

(1) There was a distinction between the man who prescribed a treatment or medicine in respect of a particular animal and one who sold remedies alleged to be suitable for animals at large.

In any event, the Court was not asked to consider the position of Boots' Cash Chemists or any other purveyor of so-called remedies. The Court was dealing with the charge brought against Mr. Haller himself. It was clear from the evidence that he saw, examined and advised as to the treatment of the animal belonging to Mr. Crabtree, and it was difficult to imagine a clearer case of the practice or alleged practice of the art and science of veterinary surgery and medicine.

Here the Chairman interposed with the remark:—

"Yes, we appreciate that, Mr. Bridge, but if he did nothing more than sell some lotion and powders to Mr. Crabtree, does it make any difference that they were of his own manufacture and not those of Bob Martin or someone similar?"

To this Mr. Bridge replied that he did not think that the question was necessarily relevant, but if it were so his reply would be that there was a distinction. If he were selling a manufactured commodity under a trade name, he would not be representing that it was fit for any purpose other than as advertised. By tendering goods of his own manufacture he was in effect representing it as the product of his own art and skill.

(2) As regards the second point raised by Mr. Whitwam, Mr. Bridge stated that the item in the First Schedule to the Act obviously was designed to deal with emergencies such as road accidents, etc. In this case, there was no such emergency and in any event the treatment continued over a period of a week or 10 days which was obviously inconsistent with the "rendering in an emergency of first aid."

After a short discussion, the Magistrates indicated that they were against Mr. Whitwam on both his contentions, whereupon Mr. Whitwam said that he would withdraw his plea of not guilty, but in mitigation would submit that anything that Mr. Haller had done had been done innocently and with the very best of motives and that he had already given his undertaking not to treat animals in the future.

Ultimately the Chairman announced that they had decided that this was not a case in which the defendant had acted in wilful disregard of regulations and that in the circumstances they would deal with him leniently by granting him unconditional discharge on payment of £6 18s. costs to include 2 guineas Advocate's fee.

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Cattle Tonic Claim Fails.—At Baltinglass District Court, Co. Wicklow, summonses brought by John Neale, trading as Associated Chemical Industries, 15, South Frederick Street, Dublin, against four local farmers, were dismissed with £20 expenses and scale fees. The proceedings were in respect of a patent animal tonic mixture, for which the defendants had been charged £7 13s. 7d. per 3-gallon tin.

Mr. D. Cullen, M.P.S.I., said he estimated that the cost of preparing the mixture at present-day wholesale prices was 9s. per 3-gallon tin, while Mr. T. Murphy, M.R.C.V.S., said that in the recommended dosage the mixture had no tonic properties.—*Irish Times.*

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

ANTHRAX:

Cards.—Gwern Yr Efail Farm, Cross Inn, Llandyssul (April 29th).

Ches.—The Old Farm, Barrow, Nr. Chester; Bagmere Farm, Brereton, Sandbach; Alvaston Farm, Nantwich (April 28th).

Dorset.—Knights Barn Farm, Salisbury Road, Shaftesbury (April 29th); Holloway Farm, Shillingstone, Blandford (May 1st).
Dunbarton.—Abronhill Farm, Castle Cary, Bonnybridge, Stirlingshire (April 29th).
Leics.—Home Farm, Ashby Parva, Rugby, Warwicks (April 26th); Piggeries, 21, The Moor, Coleorton, Leicester (April 28th).
Lothian (E.).—Newlands Farm, Gifford, Haddington (April 30th).
Somersetshire.—Gotton Farm, West Monkton, Taunton; Higher Cuttlesham Farm, Charlton, Musgrove, Wincanton (April 26th); Hadspen Farm, Castle Carey, Bath (April 28th); Wellham Farm, Somerton; Moat Farm, Compton Martin, Bristol (April 30th); Rodgrove House Farm, Wincanton (May 1st).
Southants.—Lowsley Farm, Liphook (April 26th).
Westmorland.—Mill Riggs Farm, New Hutton, Kendal (April 26th).

FOOT-AND-MOUTH DISEASE:
Angus.—Newlands, Forfar (April 30th); Broomknowe, Brechin (April 30th).
Ches.—Manor Farm, Leighton, Crewe (April 29th); No. 1, County Council Holding, Leighton, Crewe; Bache House Farm, Hurleston, Nantwich; Top Farm, Cholmondeston, Winsford (April 30th); Dairy Bank Farm, Cholmondeston, Winsford; Bowden House Farm, Bowden Lane, Marple, Stockport (May 1st).
Clackmannanshire.—Tulligarth, Clackmannan (May 2nd).
Derbys.—Hollins Farm, Rowarth, Stockport (May 1st).
Perthshire.—Croftvale, Doune (May 2nd).
Salop.—Brooklands, Pipegate, Market Drayton (May 1st).
Staffs.—The Woottens, Croxden, Rocester (May 1st).
Stirlingshire.—Big Craigforth and Ministry of Food Slaughterhouse, Stirling (May 2nd).
Sussex (E.).—Castle View, Tramroad, Rye Harbour (April 29th).

FOWL PEST:
Essex.—Goldings Manor Cottage, Loughton (April 30th).
Lincs (Kesteven).—White House Farm, Heckington, Sleaford (April 30th).
Norfolk.—Mill Farm, North Tuddenham, Dereham (April 30th).

SWINE FEVER:
Aberdeen.—Chapel Farm, Buckburn, Newhill (April 29th).
Cambs.—Scutches Farm, Whittlesford (May 2nd).
Derby.—Off Licence, Screw Mill, Hartshorne (April 28th).
Durham.—Seabank Piggeries, Grangetown, Sunderland (May 3rd).
Essex.—Colwood, Isham's Close, Wickham Bishops, Witham (May 1st).
Gloucs.—Mickleton, Campden (May 2nd).
Hants.—Kings Yard, Andover (April 28th).
Herts.—Rectory Farm, Hadley Common, Barnet (April 28th).
Lancs.—Lower Brook Farm, New Brook Road, West Houghton (April 28th).
Leics.—Union Lodge Farm, Swain's Park, Overseal (April 30th).
Lincs (Kesteven).—Bardney Causeway, Branston Fen, Lincoln (April 29th).
Lincs (Lindsey).—Woodbecks Farm, Edlington, Horncastle (April 28th); Corner Farm, Knaith, Gainsborough (April 29th).
Northants.—Gate House Farm, Culworth, Banbury (May 1st).
Oxon.—The Grange, Steeple Aston (May 3rd).
Suffolk (W.).—Halls Farm, Norton, Bury St. Edmunds (April 29th).
Surrey.—Flat C, Twynersh, Thorpe Road, Chertsey (April 28th); Croydon Lane, Banstead (April 29th).
Warwicks.—Heath Farm, Ullenhall, Birmingham (April 29th); 246, Brown's Lane, Coventry (May 1st).
Worcs.—Horse Pool Farm, Hunnington (April 30th).
Yorks (N.R.).—Thornhill Farm, Potto, Swainby (May 2nd).

Since the preparation of the above list, outbreaks of foot-and-mouth disease have been confirmed in Jersey, also in Bucks, Carnarvon, Leicestershire and Northants.

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

USE OF CHLOROPHYLL IN SMALL-ANIMAL PRACTICE

Sir,—Chlorophyll has been used with great advantage in human medicine in cases associated with malodour of one sort or another. One example of this is in colostomy, where reports of the deodorising properties of chlorophyll have been quite remarkable. In the field of dentistry also there have been encouraging results.

It is realised, of course, that chlorophyll does not have any true therapeutic action in itself, in the sense of being actively bactericidal or fungicidal.

A disagreeable skin smell from an owner's dog or cat is certainly a common enough source of complaint. That associated with severe pityriasis is a good example.

In the absence of any form of controlled experiment, a difficult enough thing in itself in this instance, one does not of course make any substantial claims, but owners' reports in the following cases seem to merit further trial and consideration.

Five cases of otitis (one cat and four dogs) were given chlorophyll tablets: cats 5 grains *b.i.d*, dogs 5 grains *t.i.d.* Ears were cleaned and dressed at intervals with (in four cases) mepyramine maleate cream, and in the last instance with butoform ointment. The results were satisfactory in each case, the time for elimination of malodour from the ears varying from five hours to four days.

Twelve cases of halitosis were treated (four cats and eight dogs). These were from non-specific causes and probably in association with other conditions. Chlorophyll tablets, 5 grains, were administered *b.i.d.* in each case, halitosis being eliminated in time varying from 12 hours to three days.

I should be interested to read if members have had equally encouraging results in actual practice.—Yours faithfully, G. F. CHILMAN, The Coach House, Chestnut Avenue, Hampton-on-Thames, Middlesex. *April 23rd*, 1952.

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TREATMENT OF BLACKLEG WITH PENICILLIN

Sir,—In the issue of your journal published on April 26th, I am taken to task for questioning the price of penicillin. As a general rule, the best judges of the merits of a therapeutic agent in veterinary practice are those who have used it for a period in the field, and have had an opportunity of comparing it, from the point of view of economy and efficiency, with other forms of treatment. The point I wanted to make was, that I did not consider penicillin had yet reached the price level where it could be used as a routine measure in the systemic treatment of large animals for the conditions one meets in everyday practice.

A more intelligent approach to the question of how to treat with some degree of success and economy subacute cases of pneumonia, septic foot lesions, septic metritis, etc., in adult cattle would appear to be by injection of the soluble sulphonamides in the early stages, followed by oral treatment with the same drugs, than by attempting to inject massive doses of penicillin twice daily. This latter course is practicable only in those cases where one has the advantage either of the co-operation of an intelligent owner or of facilities for hospitalisation of affected animals. I have found that the farmers themselves are not such bad judges, and when they come to settle their accounts leave little doubt in one's mind as to which line of treatment they prefer.

Regarding the case reported, I would like to mention that some years ago, when penicillin first became available for general use, this same owner treated successfully a case of blackleg in an 18-month-old half-bred Jersey heifer. The type of penicillin used was the ordinary crystalline form injected by the owner three or four times daily into and at the periphery of the lesion. In this case the greater part of the affected area—the gluteal and thigh region—became necrosed and sloughed. A depression still is evident in this area, but otherwise this animal is normal. No record of the amount of penicillin used was kept, but this would have been rather more than was used in the first case reported, as treatment was extended over a greater period.—Yours faithfully, J. B. CONLON, North Road, Monaghan. *April 23rd*, 1952.

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VETERINARY PRACTITIONERS

Sir,—I have read with much interest the discussion that took place between the members of the General Purposes Committee regarding the inclusion of members of the S.V.R. in the proposed investigation scheme for artificial insemination, and should like to express my thanks to those members who spoke in support. It is particularly encouraging to read the remarks made about discourtesy. Those members of the S.V.R. and B.V.A., who are doing their best not only to uphold the professional status they have been granted under the Veterinary Surgeons Act (1948), but also to conform to the professional code of ethics, find themselves, on occasion, treated with scant courtesy by members of the College.

Surely the time has come for all members of the Royal College, if not to hold out the olive branch, at least to stop indulging in unfair methods of discussing practitioners in a disparaging manner, sometimes even with their clients. After all, if we all descend to this level the general public will soon regard the veterinary profession in a light totally opposite from that which the Public Relations Committee are endeavouring to bring about.

I should also like to take this opportunity, through the columns of *The Veterinary Record*, to express my thanks to those veterinary surgeons who, when I have had occasion to ask them for a second opinion, have treated me as a colleague and an equal.—Yours faithfully, J. W. WALLER, 342, South Lambeth Road, London, S.W.8. *April 21st*, 1952.